Remarks:

Applicant appreciates the Examiner's new search, which has found references in the field of the invention. Applicant also appreciates the interview with the Examiner on July 26, 2006, in which the most recent Office Action was discussed.

In that interview, Applicant's attorney noted that Figures 13 and 14 show an example of a widening as recited in claim 8. Therefore, Applicant requests that the objection to the drawings be withdrawn.

In the interview, Applicant proposed an amendment to claims 5 and 6 to remove the language "formed by", which was objected to. That amendment is being made here.

In the interview, the Section 112 rejection for use of the word "downwardly" was discussed. Applicant's attorney pointed out that there is ample basis in the specification to support the addition of that language, based on the relative motion between the insert and the core, but the Examiner said that he did not consider "downwardly" to be a relative term relating the core to the insert but rather considered it to be an absolute term denoting an absolute direction. The purpose of adding the "downwardly" language was to make the relative direction of motion between the insert and the core clear, and this can be accomplished without the use of the "downwardly" language. In claims 1 and 2 as now written, the top surface of the insert is initially above the top surface of the core, and the insert is inserted into the channel and is pressed toward the crush rib until the top surfaces come into alignment. Thus, these claims make the relative direction of motion between the insert and core clear and distinguish from a situation in which the insert moves lengthwise, along the rib, in a direction that cannot be used to crush the rib. This claim language is well-supported by the specification, from page 9, line 4, to the bottom of the page. It should also be noted that words such at "top" and "bottom" are also intended to be relative terms, so, for example, if the entire apparatus were turned completely upside down or sideways from what is shown in the specification, the claims still would read on it, because the relative positions and directions of motion of the parts would still be the same.

In the interview, the Curtis and Petterson references were discussed. Applicant's attorney explained that the proposed reason to combine those references is not applicable.

The Office Action states that it would be obvious to incorporate the crush rib of Pettersson into the Curtis product "in order to allow expansion and contraction of the composite board."

Pettersson teaches a way of assembling tongue and groove joints with a rib serving as a spacer to create a gap between the assembled members so that, if the members swell after assembly, they can crush the rib and shift relative to each other to accommodate the expansion without causing deformation or buckling of the structure. As shown in Figures 3 and 4 of Pettersson, there is a rib 11 in the groove, which prevents the surfaces 13 and 15 of the adjacent boards from contacting each other when they are assembled. Instead, there is a gap between those surfaces 13, 15, which is about the same dimension as the height of the rib 11. If the boards swell, as shown in Figure 5, the two adjacent boards can shift relative to each other, reducing the size of the gap as they crush the rib 11, without the surfaces 13, 15 coming into contact with each other. This prevents the creation of a force that would cause buckling or deformation of the structure.

The method taught by Pettersson accommodates expansion of members in an assembly by providing a way for the members to shift relative to each other to relieve the stresses caused by expansion. However, it would not solve any problems in the product of Curtis, where the members are permanently fixed together and cannot shift relative to each other.

In Curtis, as shown best in Figure 2, the rod 12 (the insert) is adhered to the board 10 by an adhesive 22. Since the structure of Curtis is not a tongue and groove arrangement as in Pettersson, in which expansion of the boards would cause adjacent faces to press against each other to cause buckling, it is not clear what stresses would be produced by the expansion of the board in Curtis that a person of ordinary skill in the art would want to try to relieve by adding a crush rib.

However, even if a rib were added to Curtis, it could not function to relieve stresses by allowing the rod (the insert) to shift relative to the board (the core), because, once the rod and board are assembled together, the adhesive prevents them from shifting relative to each other. Adding a rib between the rod and the board would not change that situation. If a rib were inserted at the bottom of the channel of Curtis, it also would be glued in place and would just remain in its fixed position relative to the rod, thanks to the adhesive. Not only would the adhesive hold the parts in fixed relation to each other to prevent their shifting relative to each other, but it also would surround the rib, serving as a filler that would prevent the rib from being crushed even if some external force were applied to the top of the rod sufficient to break the adhesive bond between the rod and the board and push the rod downwardly into the channel. (Of course it cannot be considered obvious to apply a destructive force to break the adhesive bond and ruin the Curtis product as it is intended to be used.) Thus, the method of Pettersson is totally inapplicable to the product taught by Curtis.

A person of ordinary skill in the art would not consider it obvious to add a rib to Curtis to relieve stresses due to expansion and contraction of the board, both because the structure of Curtis would not give rise to the same kinds of stresses as the structure of Pettersson and because adding a rib to Curtis would not work to relieve any stresses, since it would not enable the members to shift relative to each other.

It should be noted that the purpose of the crush rib in the present invention is not to accommodate expansion and contraction of the members after assembly. Instead, its purpose is to permit the members to be properly aligned during assembly. This purpose is not taught or suggested in the cited references.

Claim 1 recites the following:

A process for making a composite profile, including at least one core piece and one insert piece, each having a top surface and a bottom surface, and a length extending from a first end to a second end, and each having substantially the same profile from its first end to its second end, wherein said core piece defines a channel sized to receive said insert piece, said channel extending lengthwise from said first end to said second end, comprising the steps of:

providing a crush rib between the bottom surface of the insert piece and the channel;

inserting said insert piece into the channel, with the top surface of the insert initially above the top surface of the core; and

pressing said insert piece toward the crush rib to deform the crush rib until the top surfaces of the insert and the core are aligned.

Curtis does have some embodiments in which the top of the insert is aligned with the top of the core (see Figures 3 and 4). However, there is no suggestion to assemble the insert and core by pressing the insert against a crush rib in order to bring the tops of the insert and core into alignment. Pettersson does not teach such an assembly method. In Pettersson, with a tongue and groove construction, the insert (the board with the tongue) projects far beyond the top of the core (the side of the adjacent board with the groove), and the tops of those two members never come into alignment.

There is nothing in Pettersson that would suggest adding a rib to Curtis in order to bring the top surfaces of the insert and core into alignment as claimed, and there would be no motivation to add a rib to Curtis in order to accommodate expansion and contraction as taught by Pettersson, because adding a rib would not function to accommodate expansion and contraction. Thus, the invention as claimed is not obvious in view of the cited references.

Claim 2 is similar to claim 1 and adds the step of passing the core and insert assembly through an extrusion die to apply a coating. While Zanini does teach the use of an extrusion die to apply a coating to a composite of interlocking strips, the cited references would not make it obvious to a person of ordinary skill in the art to follow the assembly method recited in claim 2, of pressing an insert into a core against a crush rib to bring the top surfaces into alignment and then passing that aligned assembly through a die to apply a coating. To the contrary, Zanini uses dovetail joints between the members that pass through the die, teaching against the claimed invention by requiring the members to be assembled by sliding them together lengthwise prior to coating. The dovetail joints of Zanini do not permit the insertion of one member toward a crush rib.

Claim 4 depends from claim 2 and adds the limitation of providing a wider gap between the insert and the core near the top than further into the core and applying a coating into that wider gap. This claim was rejected based on a combination of Curtis, Pettersson and Zanini. In addition to the reasons explained above, this combination would not be obvious because the wider gap in Curtis is already filled with adhesive and therefore could not be filled by the coating as claimed.

Claim 10 recites the following:

A process for making a composite profile, including at least one core piece and one insert piece, each having a top surface and a bottom surface, and a first end and an opposite second end, wherein said core piece defines a first channel sized to receive said insert piece, comprising the steps of:

providing a crush rib between the bottom surface of the insert piece and the channel;

pressing the insert piece into said first channel to deform the crush rib until the top surfaces of the insert and the core are aligned;

wherein said channel defines at least one leg, and said insert piece defines at least one side surface, and

applying adhesive to at least one of said leg and said side surface prior to pressing said insert piece and said core piece together;

wherein said bottom surface of said core piece defines at least one shallow pocket to act as a repository for any extra adhesive applied.

The Curtis reference does teach a shallow pocket to act as a repository for extra adhesive. However, it would not be obvious to add a rib to Curtis and to crush that rib while pressing the insert piece into the channel and while applying adhesive to hold the assembly together as recited in this claim. Curtis does not indicate that there is any problem with bringing the top surfaces of the insert and core into alignment that would require a modification of the design. In any case, Pettersson teaches that the adjacent members should not be brought into

alignment during the assembly process, because it wants there to be a gap that provides room for the members to shift relative to each other after assembly. Thus, if anything, Pettersson teaches against bringing the adjacent members into alignment during assembly as recited in this claim.

Claim 11 recites the following:

A process for making a composite profile, including at least one core piece and one insert piece, each having a top surface and a bottom surface, and a first end and an opposite second end, wherein said core piece defines at least a first channel sized to receive said insert piece, comprising the steps of:

providing a crush rib between the bottom surface of the insert piece and the first channel;

pressing the insert piece into said first channel to deform the crush rib until the top surfaces of the insert and the core are aligned;

wherein said first channel defines at least one leg, and said insert piece defines at least one side surface, and

applying adhesive to at least one of said leg and said side surface prior to pressing said insert piece and said core piece together;

and further comprising the step of applying adhesive along an opposite second surface of said core piece so as to counter uneven expansion due to moisture absorption by said core piece from said adhesive.

While the Kalinin reference does teach adhering reinforcements on opposite sides of a beam, it does not make the claimed combination obvious for the reasons explained earlier.

Since all the claims recite an invention that is both novel and unobvious in view of the prior art, Applicant respectfully requests allowance of all the claims now pending in the present application. If there are any remaining problems with this application, Applicant's attorney would appreciate a call from the Examiner to help expedite their resolution.

Respectfully submitted,

Theresa Camoriano

Theresa Fritz Camoriano
Reg. No. 30,038
Camoriano and Associates
8225 Shelbyville Road, Louisville KY 40222
phone 502-423-9850 fax 502-426-1167